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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/550,946

09/28/2005

Shigeru Endo

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EXAMINER

SANDERS, KRIELLION ANTONETTE

ART UNIT

PAPER NUMBER

1796

MAIL DATE

DELIVERY MODE

02/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/550,946	Applicant(s) ENDO, SHIGERU	
	Examiner Kriellion A. Sanders	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claims 1-2 recites the limitation "component A" and "said component B" and component(C) and component (D) in lines 5-7 of claim 1, line 2 of claim 9 and line 2 of claim 11. There is insufficient antecedent basis for this limitation in the claim. The claimed components are not identified as A and B.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2002155179 in view of Bajgur et al. US Patent No. 6,822,025 and Taubitz et al. US Patent No. 4,618,633.
6. JP 2002155179 discloses a styrenic flame-retardant resin composition which has excellent flame retardance without the use of a halogenated compound. The composition also exhibits excellent heat resistance, flowability, impact resistance, balance, excellent external

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appearance of a molded particle and is suitable for use in an electrical/electronic apparatus and an office automation apparatus.

7. The flame-retardant resin composition comprises (A) 100 pts. wt, styrenic resin having a weight loss residue on heating at 500 deg. C of 5% and (B) 5-50 pts. wt, flame-retardant component having no halogen compound, and component (B) has a weight average molecular weight of 2,000- 500,000 and is dispersed in component (A) in the form of particles having an average particle diameter of 0.01-5 *um*, and has a weight loss residue on heating at 500 deg. C of $\geq 25\%$ and, simultaneously, a melting point of 100 deg.C-400 deg. C.

Bajgur et al discloses a flame retardant thermoplastic resin composition comprising a polyphenylene ether resin, a high impact polystyrene resin or an acrylonitrile-butadiene-styrene resin; an organo phosphate compound in an amount less than or equal to about 20 parts by weight for every 100 parts by weight of the thermoplastic resin; and a polyhydric alcohol compound in an amount of about 0.5 to about 5.0 parts for every 100 parts by weight of the thermoplastic resin. Patentee also discloses a method for the manufacture of the thermoplastic resin composition. The thermoplastic resin composition exhibits high flow characteristics and improved impact strength while providing effective flame retardancy. Patentee also recognizes the use of certain cyclic phosphates, for example, diphenyl pentaerythritol diphosphate, as a flame retardant agent for polyphenylene ether resins. See col. 2, line 45 - col. 3, line 46 and col. 9, lines 23-32.

Taubitz et al discloses a halogen-free self-extinguishing thermoplastic composition comprising as the flame retardant, one or more phosphorus-containing compounds or elemental phosphorous, a polyphenylene ether, a styrene-acrylonitrile copolymer, a phenol/aldehyde resin,

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a terpolymer of styrene, acrylonitrile and a hydroxy-containing ester of acrylic or methacrylic acid on which a polyphenylene ether is grafted, and optionally, a diene elastomer having grafted thereon styrene and acrylonitrile monomers.

Taubitz et al discloses a large variety of phosphorus compounds suitable for flame-retarding resinous blends of styrenic and polyphenylene ether resins. diphenyl pentaerythritol diphosphate and phenyl neopentyl phosphate being particularly suitable. See col. 5, line 60 through col. 8, line 38.

It would have been obvious to use the pentaerythritol diphosphonates and diphosphates of Taubitz et al or Bajgur et al as the flame retardant component of the Japanese reference with the expectation of achieving enhanced flame retardancy. This is particularly evident in view of the fact that Taubitz is directed to blends of styrene and polyphenylene ether resins. Bajgur et al also suggests using additional conventional coadditives. See col. 10, lines 31-36. Incorporation of such additives into the compositions of the Japanese reference would have also been obvious. Any such co-additive having a polar group would function as a compatibilizer for the compositions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kriellion A. Sanders whose telephone number is 571-272-1122. The examiner can normally be reached on Monday through Thursday 8:30am-7:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kriellion A. Sanders/

Primary Examiner, Art Unit 1796

Kriellion A. Sanders
Primary Examiner
Art Unit 1796

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